

Date: Sat, 28 May 94 04:30:15 PDT  
From: Ham-Ant Mailing List and Newsgroup <ham-ant@ucsd.edu>  
Errors-To: Ham-Ant-Errors@UCSD.Edu  
Reply-To: Ham-Ant@UCSD.Edu  
Precedence: Bulk  
Subject: Ham-Ant Digest V94 #161  
To: Ham-Ant

Ham-Ant Digest                      Sat, 28 May 94                      Volume 94 : Issue 161

## Today's Topics:

"J pole" like antenna using coax instead of twinlead  
(none)  
Dipole in the trees!  
help with 4 element yagi.. Please..  
More on 10 meter dipole  
Zip cord as antenna

Send Replies or notes for publication to: <Ham-Ant@UCSD.Edu>  
Send subscription requests to: <Ham-Ant-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Ant Digest are available (by FTP only) from UCSD.Edu in directory "mailarchives/ham-ant".

We trust that readers are intelligent enough to realize that all text herein consists of personal comments and does not represent the official policies or positions of any party. Your mileage may vary. So there.

Date: Fri, 27 May 1994 04:31:06 GMT  
From: iglou!iglou!jmorton@uunet.uu.net  
Subject: "J pole" like antenna using coax instead of twinlead  
To: ham-ant@ucsd.edu

teacherjh@aol.com (Teacherjh) writes:

>In article <wa2iseCqDy47.1HI@netcom.com>, wa2ise@netcom.com (Robert  
>Casey) writes:

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> > Is there a design similar to the Jpole I can build
> > with these scraps of coax?
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>There is a dipole that can be made by exposing the center element for  
>one quarter wavelength, by folding back the shield for another  
>quarter wavelength. I don't know all the details of it, perhaps  
>someone could fill in. It also seems that there would be some

>interaction between the folded back shield and the unfolded shield it  
>is going over, as a dipole is balanced, and coax is unbalanced.

>Jose KD1SB

I have built the antenna that Jose mentions and used them for emergency  
antennas or suit-case antennas when traveling.

For a 2m antenna, strip off about 3 feet of the outer jacket to expose the  
braid. Next, push the exposed braid so that it doubles over the jacket  
remaining on the rest of the coax. At this point you end up with about  
2 feet of braid that is now the outer layer of the coax and a 3 ft  
section of the the center conductor extending out the end of the cable  
away from the folded back braid. I usually cut the center conductor to  
about 20 inches from where it enters the cable, strip off about 1.5 in  
of insulation, make a loop in the end of it so that the center conductor  
is about 19 inches from the tip of the loop to where it enters the cable.  
The loop is there to make it easy to hang the antenna with a string. I  
then "adjust" the length of the folded back for about 19 inches also, tape  
it down, and put a connector on the thusfar untouched end of the cable.

Just a word to the wise. I said to start off with about 3 feet of the  
outer jacket removed. It's going to surprise you how short that braid  
is going to be when you roll it back over the cable's outer jacket.

BTW, a picture is worth.... Well, you know.....

John, WA4UMR

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# John V. Morton      jmorton@ig1lou.com      wa4umr@w4cn.ky

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Date: 27 May 94 19:52:29 GMT  
From: news-mail-gateway@ucsd.edu  
Subject: (none)  
To: ham-ant@ucsd.edu

signoff

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Date: Fri, 27 May 1994 14:42:00 GMT  
From: ihnp4.ucsd.edu!swrinde!gatech!darwin.sura.net!news.duc.auburn.edu!lab41!  
gibsowc@network.ucsd.edu  
Subject: Dipole in the trees!

To: ham-ant@ucsd.edu

I am planning to install an inverted vee for 160, 80, and 40 meters at my house in the next week or two. I am planning on feeding it with 450 ohm ladder line and an antenna tuner.

The problem with the setup is that I have nowhere to string the antenna except from the top of the house, across the yard about 40 or so feet, and then into the woods that are to the sides of the house. What effect will the trees around the antenna (I'd say about maybe half of the antenna would be in the woods) have on its performance? I'm thinking that the trees around it will create some sort of an impedance problem at its end, but maybe some more knowledgeable folks could fill me in.

73/dx  
Walton C. Gibson, KE4FXN  
gibsowc@eng.auburn.edu

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Date: 26 May 94 11:50:44 EDT  
From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!darwin.sura.net!wvnmvs!  
marshall.wvnet.edu!desaid@network.ucsd.edu  
Subject: help with 4 element yagi.. Please..  
To: ham-ant@ucsd.edu

Hi antenna Gurus:

I am planning on making 4 element yagi for 2 meter (especially 145.01 or 145.05) radio to do packet and sometimes on other 2 meter frequencies (rarely) I have following materials with me. Old TV antenna boom and elements of various sizes. and a gamma match made up of aluminum pipe and RG-8 cable. Size of gamma match is not yet determined. Will someone tell how to go about construction of this 4 element antenna and give some measurements for elements and gamma match that has worked for you. I would greatly appreciate your help in this project. This is my first project of antenna and I would like it to work.

Thanks a lot.

73, Dinakar kb8phz

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Date: Fri, 27 May 1994 11:55:04 GMT

From: ihnp4.ucsd.edu!agate!spool.mu.edu!torn!nott!cunews!freenet.carleton.ca!  
FreeNet.Carleton.CA!am432@network.ucsd.edu  
Subject: More on 10 meter dipole  
To: ham-ant@ucsd.edu

In a previous article, HICKS.ALAN@epamail.epa.GOV (ALAN HICKS 617-860-4388) says:

> Finally, you bet that I didn't know exactly what "es" means in  
> Morse code. Well, "es" comes from the Spanish word for "and".  
> The ARRL Operating manual says it means "and" and that's how I  
> use it. So "Gd luck es 73 de KD1DJ" would mean

I thought DIT DI-DI-DIT was the old landline (American) Morse ampersand.  
Certain characters, like "P" and "&", had a space (different length)  
embedded in the character.

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Brice Wightman  
Ottawa, Canada

VE3EDR

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Date: 27 May 94 19:49:39 GMT  
From: news-mail-gateway@ucsd.edu  
Subject: Zip cord as antenna  
To: ham-ant@ucsd.edu

Jeff Herman asked about Zip cord as an antenna or transmission line. The  
1988 edition of the ARRL antenna book presented an analysis of zip cord.  
I'll quote the most interesting parts.

15-2 to 15-3

as an antenna:

"This information by Jerry hall, K1TD...QST for March, 1979"  
"insulation left on the wire may have some loading effect so a bit of  
length trimming may be needed fro exace resonance"

"use an electrician's knot that will keep the system from unqipping itself  
under the tension of dipole suspension"

"But just how efficient is a zip-cord antenna system?...zip cord looks  
about like 72-ohm balanced feed line. Does it work as well?"

as a transmission line:

"100 foot roll was subjected to tests in the ARRL lab with an RF impedance bridge"

"18 gauge, brown, plastic insulated type SPT-1".

"Characteristic impedance...107 ohms at 10 mhz, dropping in value to 105 ohms at 15 mhz and to a slightly lower value at 29 mhz. The nominal value is 105 ohms at HF. The velocity factor of the line was determined to be 69.5%."

"Who needs 105 ohm line, especially to feed a dipole? A dipole in free space exhibits a feed-point impedance of 73 ohms, and at heights above ground of less than 1/4 wavelength the resistance can be even lower...80 meter dipole at 35 feet over average soil...35 ohms. Thus, for a resonant antenna, the SWR in the zip-cord transmission line can be 105/35 or 3:1, and maybe even higher in some installations."

"But the really bad news is still to come-line loss!" Fig. 3...attenuation in db per hundred feed of line versus frequency. values based on assumption that line is perfectly matched (sees a 105 ohm load as its terminating impedance"

some values from the figure:

Frequency	Attenuation, db per 100 ft.
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3.5	0.75
7	1.75
10	2.5
14	3.9
21	5.6
28	7.2

Continuing:

"Additional losses over those charted in fig. 3 will occur when standing waves are present. The trouble is, you can't use a 50 or 75 ohm SWR instrument to measure the SWR in zip-cord accurately."

"In short, communications can certainly be established with a zip-cord antenna in a pinch on 160, 80, 40 30 and perhaps 20 meters. For higher frequencies...long line lengths...the efficiency of the system is so low that its value becomes questionable."

73 Mark KA3LFG

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End of Ham-Ant Digest V94 #161  
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